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TITLE: Blast Overpressure Studies with Animals and Man

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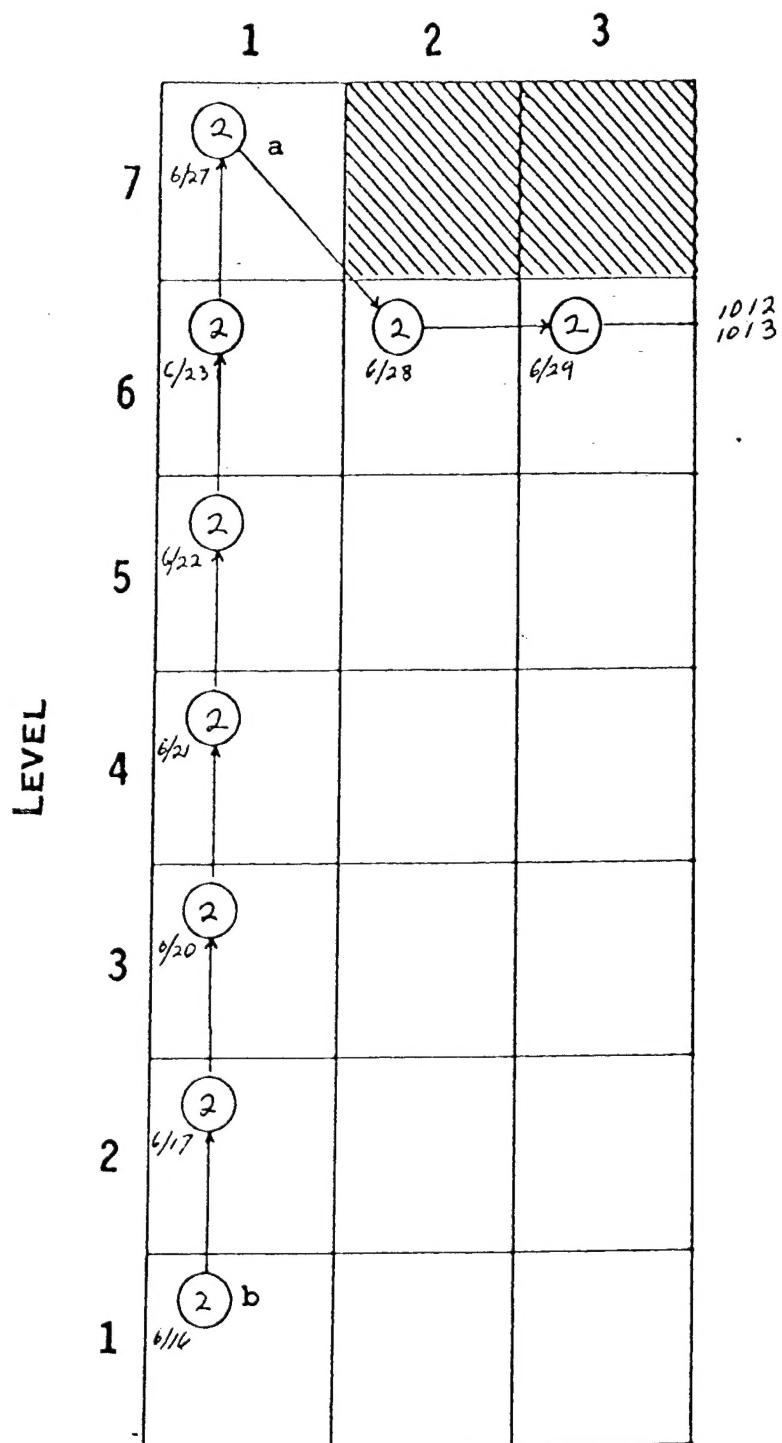
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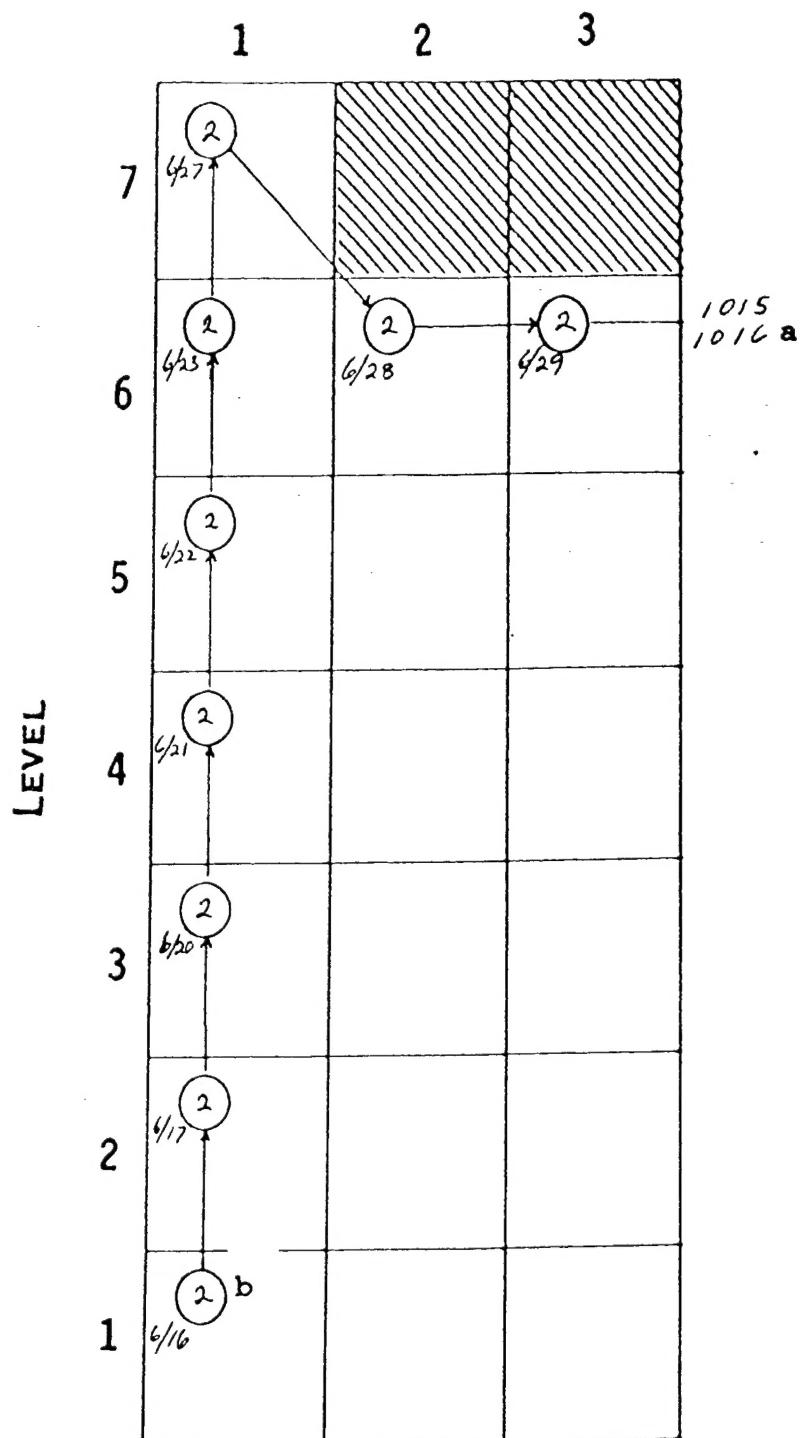
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APPENDIX E. SUMMARY OF EACH SUBJECT'S PATH THROUGH THE MATRIX



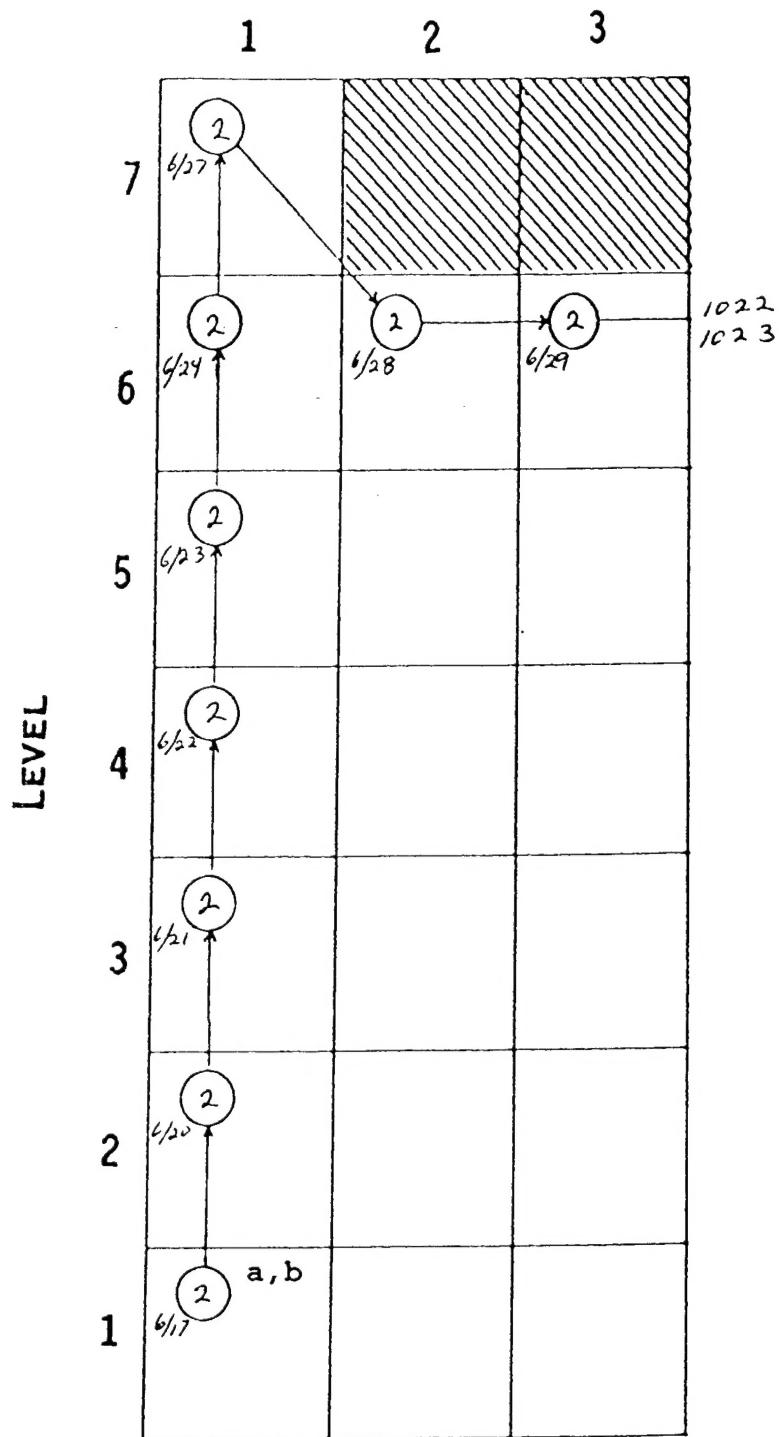
Appendix E-1. Exposure Matrix for Subjects 1012 and 1013, June 1994.

- a. Subject 1012 had positive guaiacs after Level 6 on the weekend of 25-26 June 94; negative thereafter.
- b. Levels "00" and "0" were passed on 14 and 15 June, respectively.



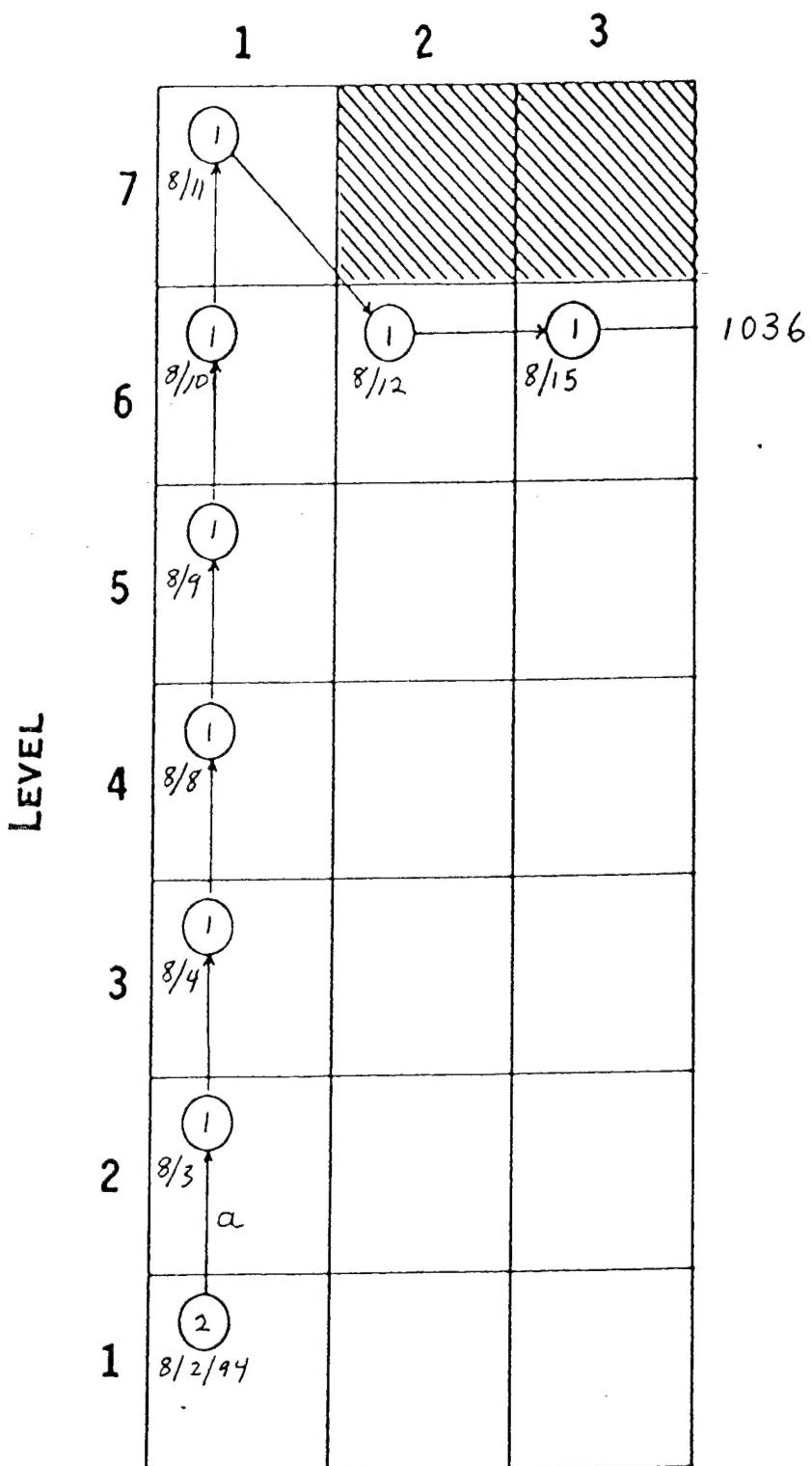
Appendix E-2. Exposure Matrix for Subjects 1015 and 1016, June 1994.

- a. Subject 1016 had a positive guaiac on 1 July 94; negative thereafter.
- b. Levels "00" and "0" were passed on 14 and 15 June, respectively.

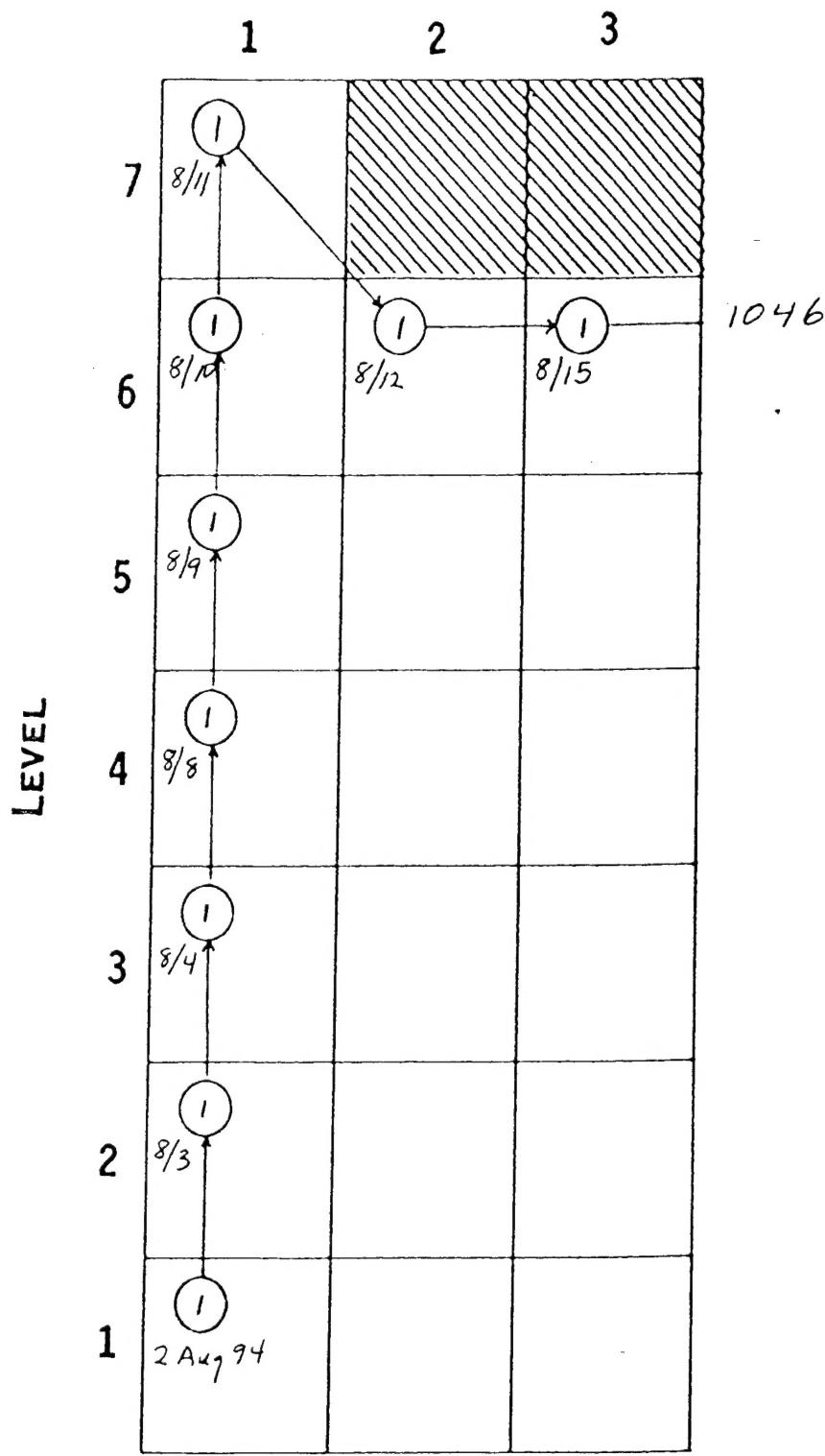


Appendix E-3. Exposure Matrix for Subjects 1022 and 1023, June 1994.

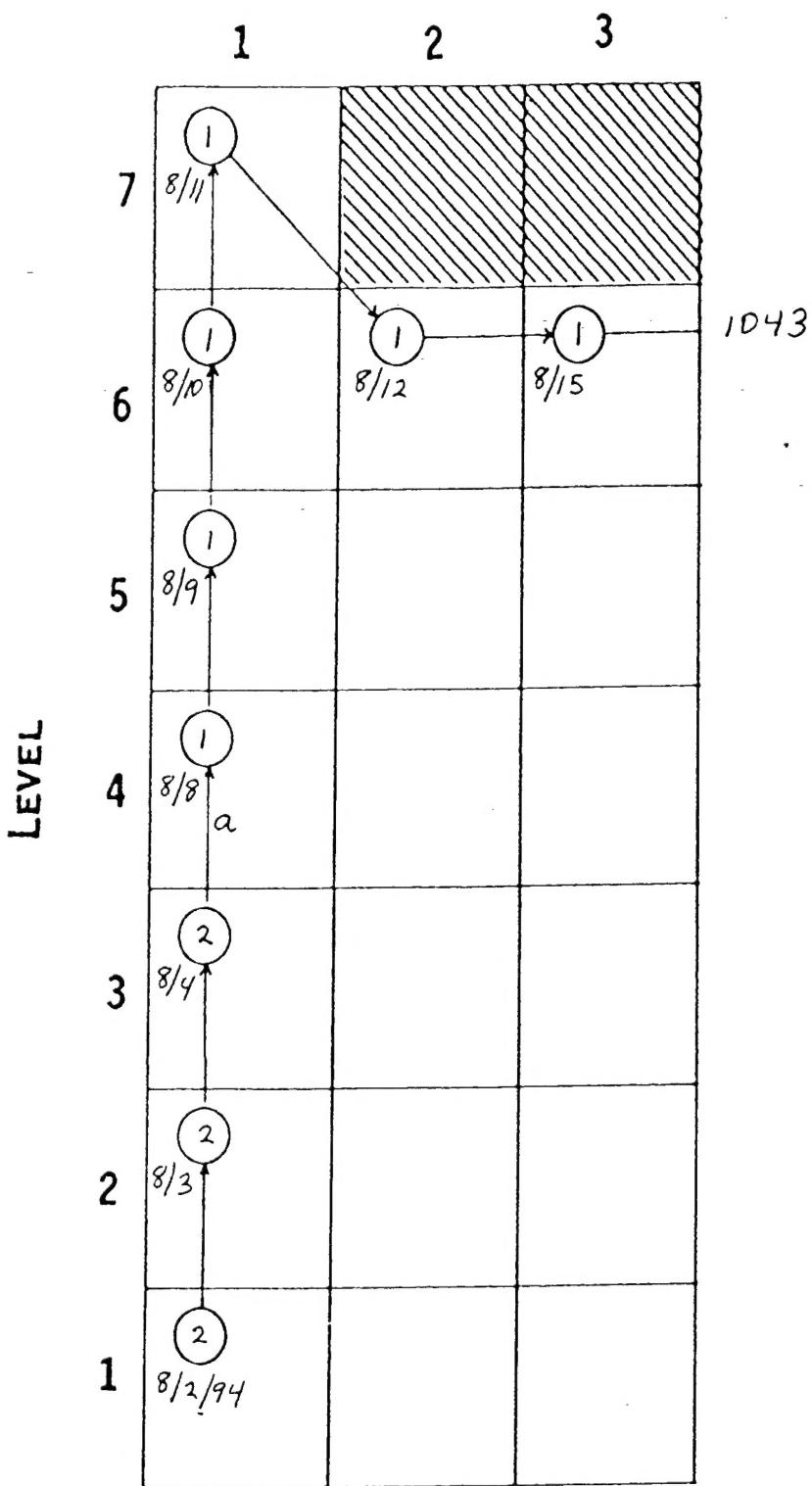
- a. Subject 1022 had a positive guaiac after Level 1; negative thereafter.
- b. Levels "00" and "0" were passed on 15 and 16 June, respectively.



Appendix E-4. Exposure Matrix for Subjects 1035 and 1036,
August 1994.
a. Subject 1035 elected to stop after Level 1.

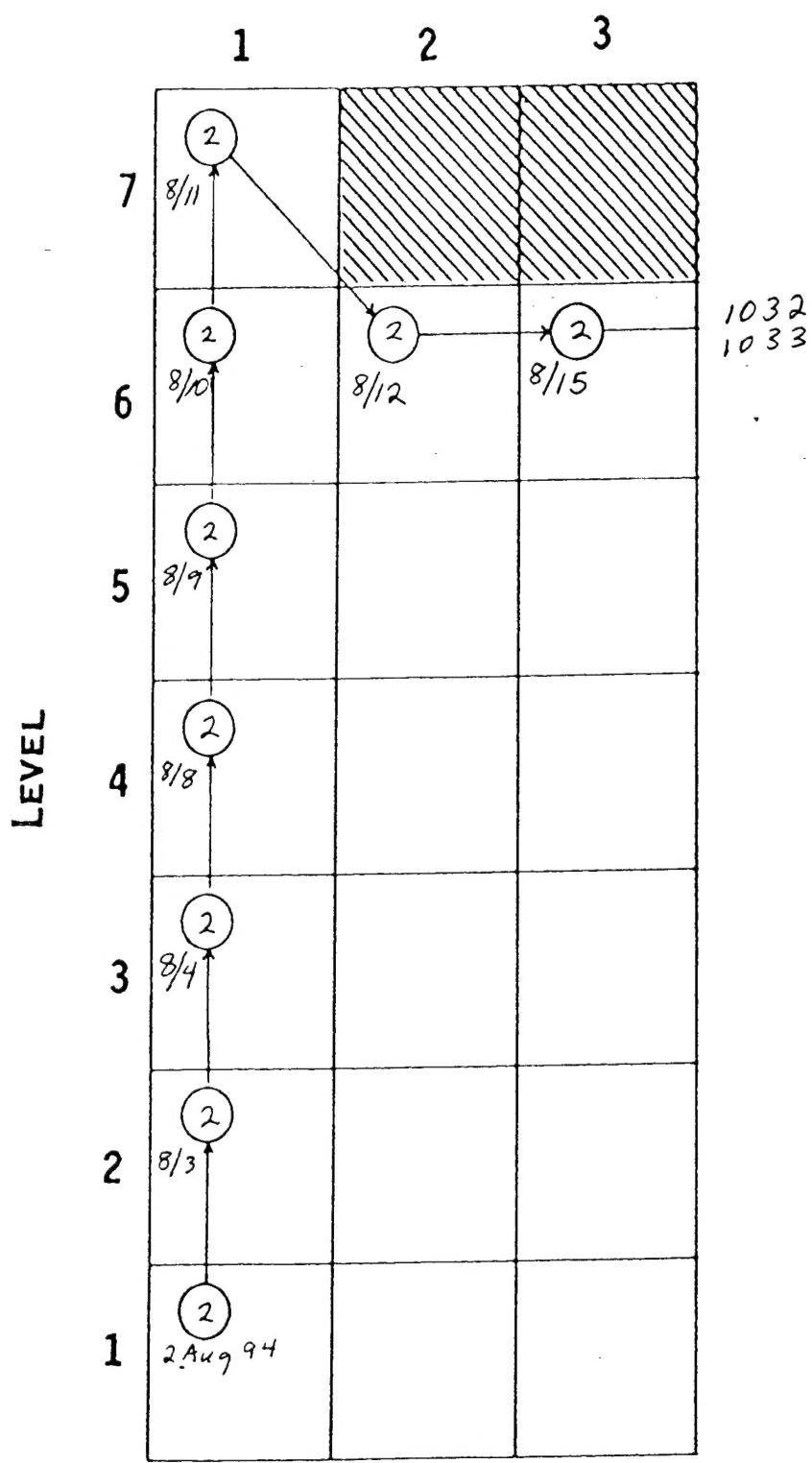


Appendix E-5. Exposure Matrix for Subject 1046, August 1994.

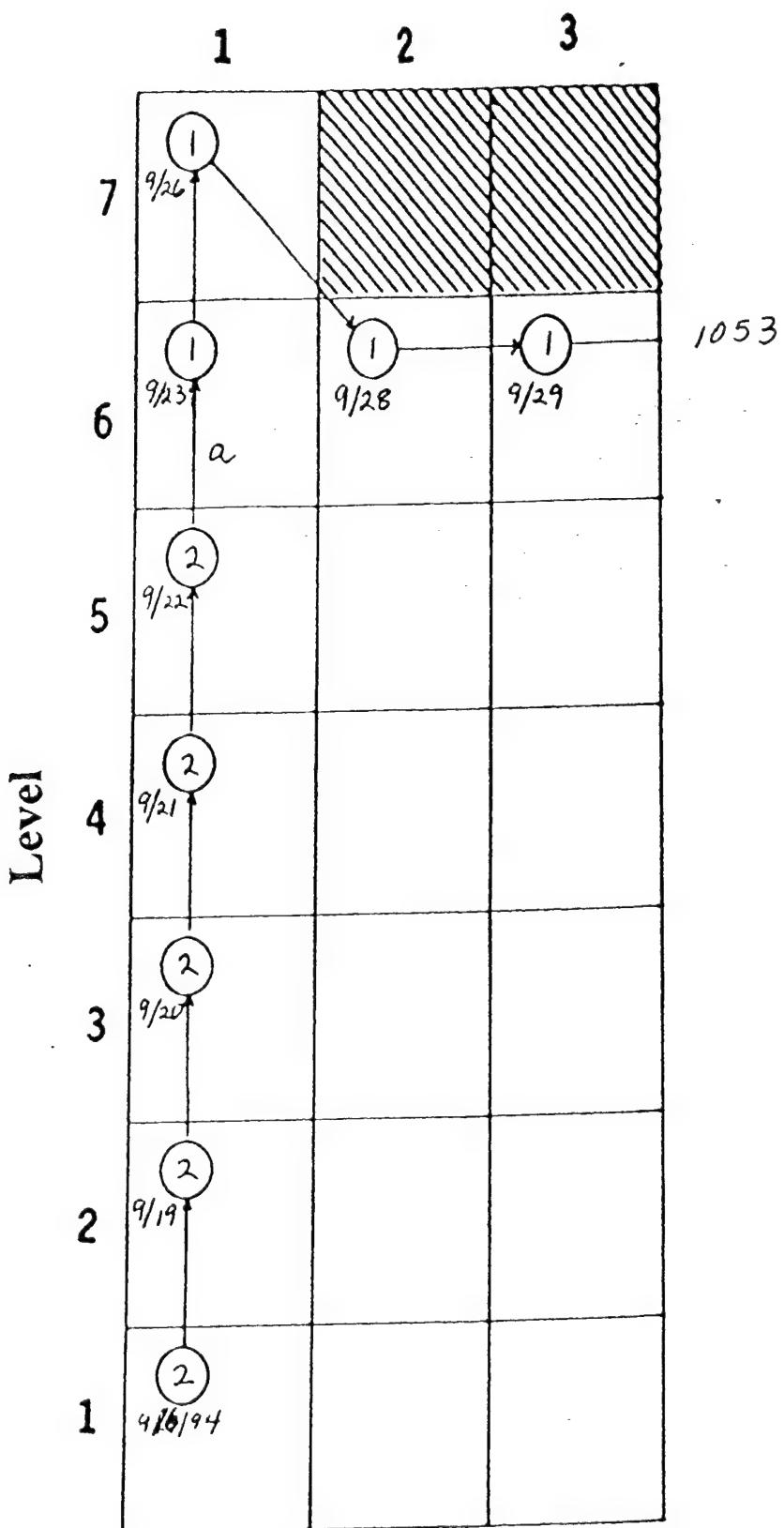


Appendix E-6. Exposure Matrix for Subjects 1042 and 1043,
August 1994.

a. Subject 1042 elected to stop after Level 3
because of family problems.



Appendix E-7. Exposure Matrix for Subjects 1032 and 1033,
August 1994.



Appendix E-8. Exposure Matrix for Subjects 1052 and 1053,
September 1994.

a. Subject 1052 was not exposed further because of
chronic ulcers.

	1	2	3
LEVEL			
7	(2) 9/28		
6	(2) 9/27	(2) 9/29	(2) 10/3 a 1055 1056
5	(2) 9/26		
4	(2) 9/23		
3	(2) 9/22		
2	(2) 9/21		
1	(2) 9/20/94		

Appendix E-9. Exposure Matrix for Subjects 1055 and 1056, September 1994.

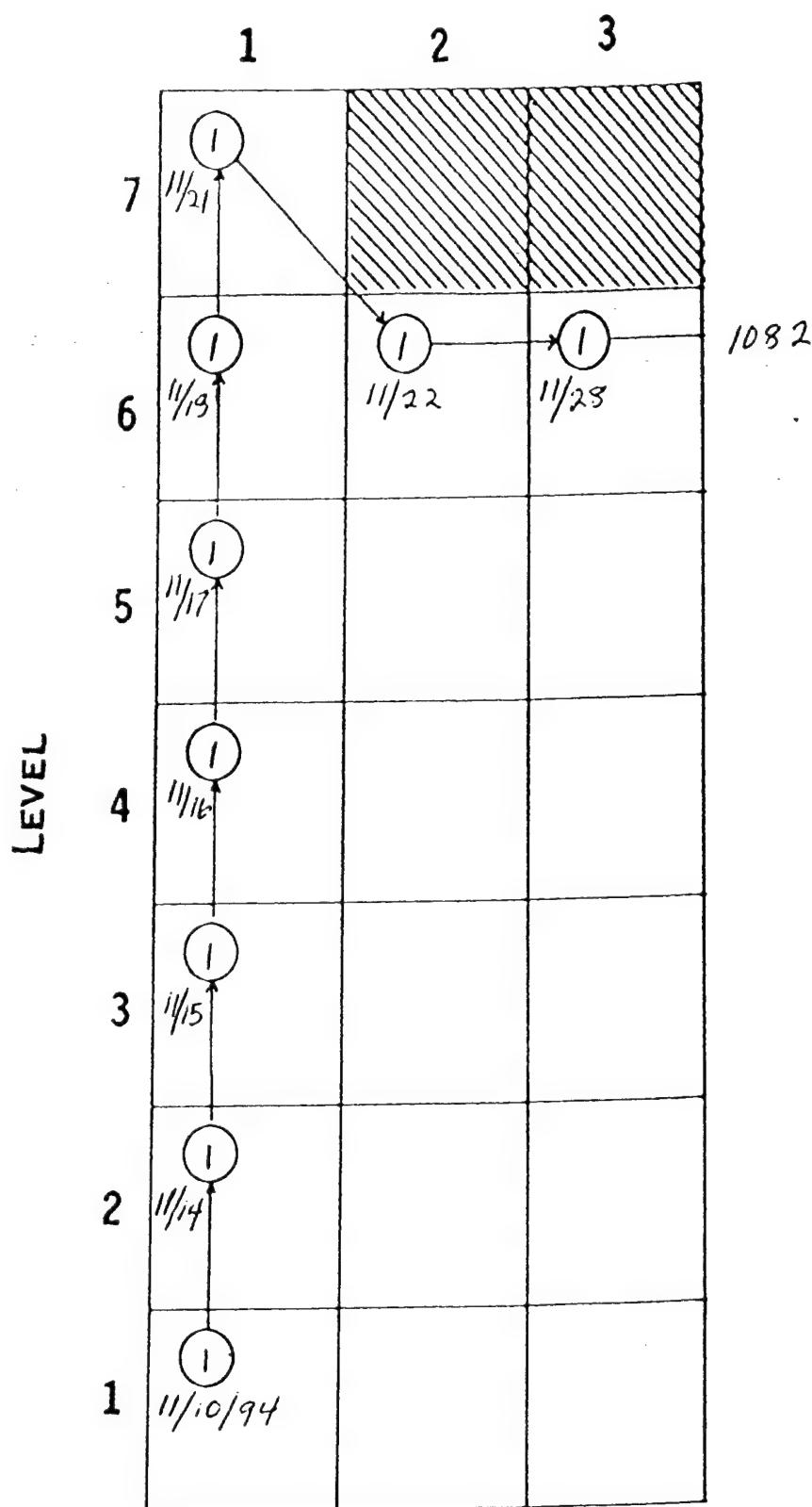
a. Subject 1056 was a conditional failure after condition 6/3 and was not exposed further.

	1	2	3
LEVEL			
7	(3) 9/28		
6	(3) 9/27	(3) 9/29	(3) 10/3
5	(3) 9/26		
4	(3) 9/23		
3	(3) 9/22		
2	(3) 9/21		
1	(3) 9/20/94		

Appendix E-10. Exposure Matrix for Subjects 1062, 1063 and 1065, September 1994.

	1	2	3	
LEVEL				
7	(4) 11/17			
6	(4) 11/16	(4) 11/18	(4) 11/21	1072 1073 1075 1076
5	(4) 11/15			
4	(4) 11/14			
3	(4) 11/13			
2	(4) 11/9			
1	(4) 11/8/94			

Appendix E-11. Exposure Matrix for Subjects 1072, 1073, 1075, and 1076, November 1994.



Appendix E-12. Exposure Matrix for Subject 1082, November 1994.

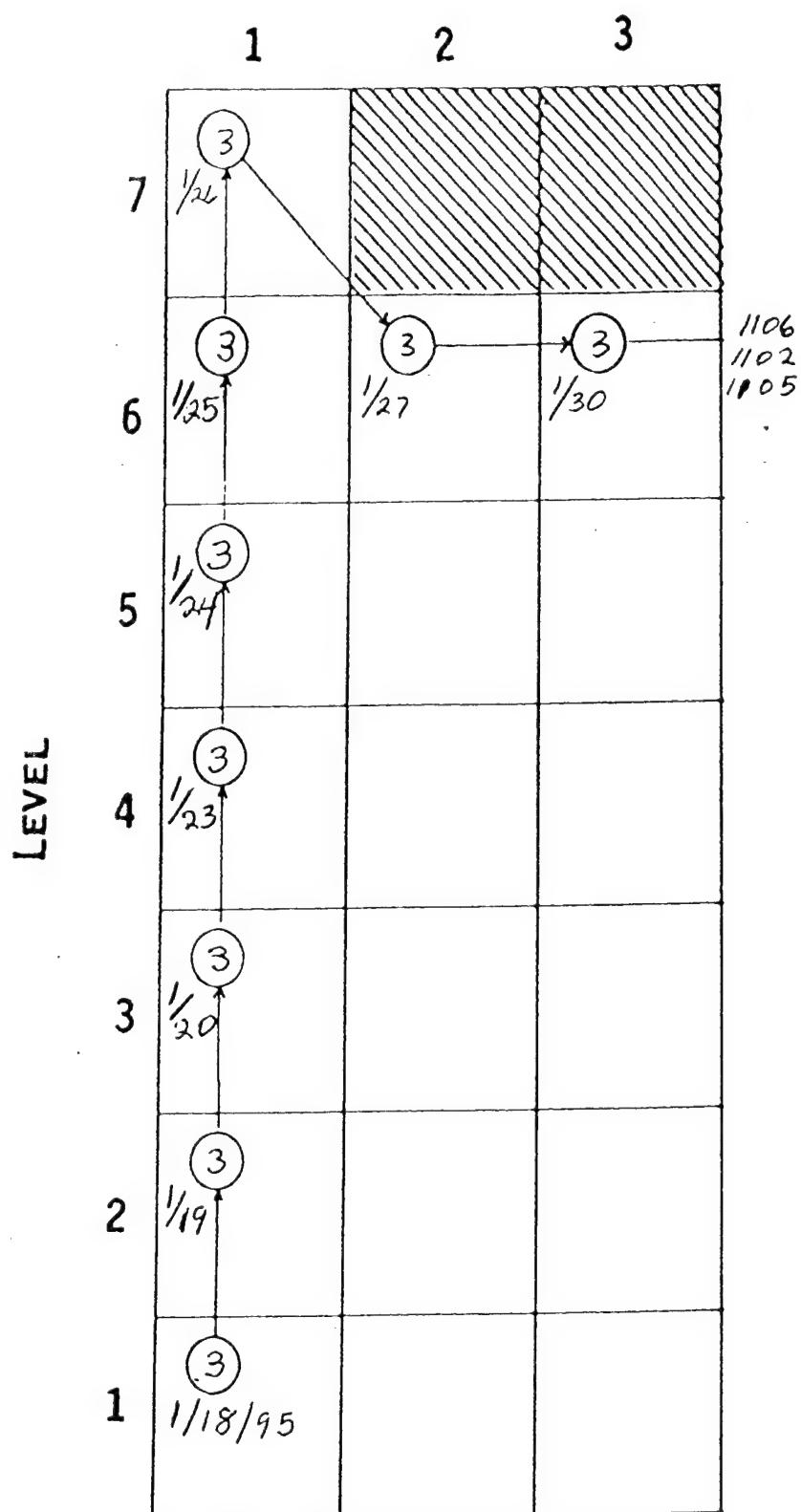
	1	2	3
LEVEL			
7	(4) 1/26		
6	(4) 1/25	(4) 1/27	(4) 1/30
5	(4) 1/24		
4	(4) 1/23		
3	(4) 1/20		
2	(4) 1/19		
1	(4) 1/13/95		

Handwritten notes: Row 6, Col 3 has a diagonal line through it. Row 6, Col 4 has a horizontal line through it. Row 7, Col 1 has a circle around the date. Row 7, Col 2 has an arrow pointing to the date. Column 3 has a diagonal hatching pattern.

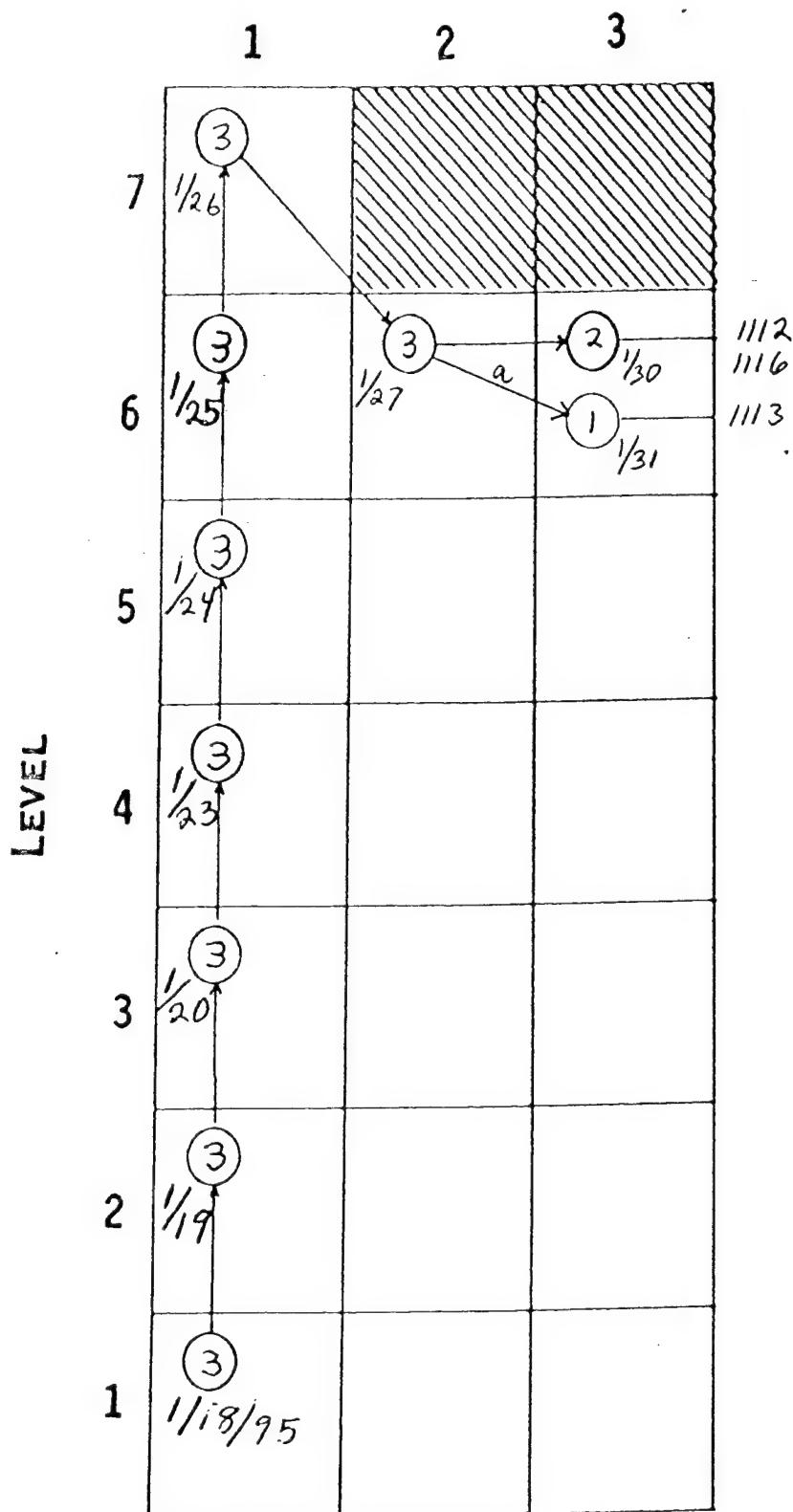
Handwritten numbers on the right side of the grid:

- 1092
- 1093
- 1095
- 1096

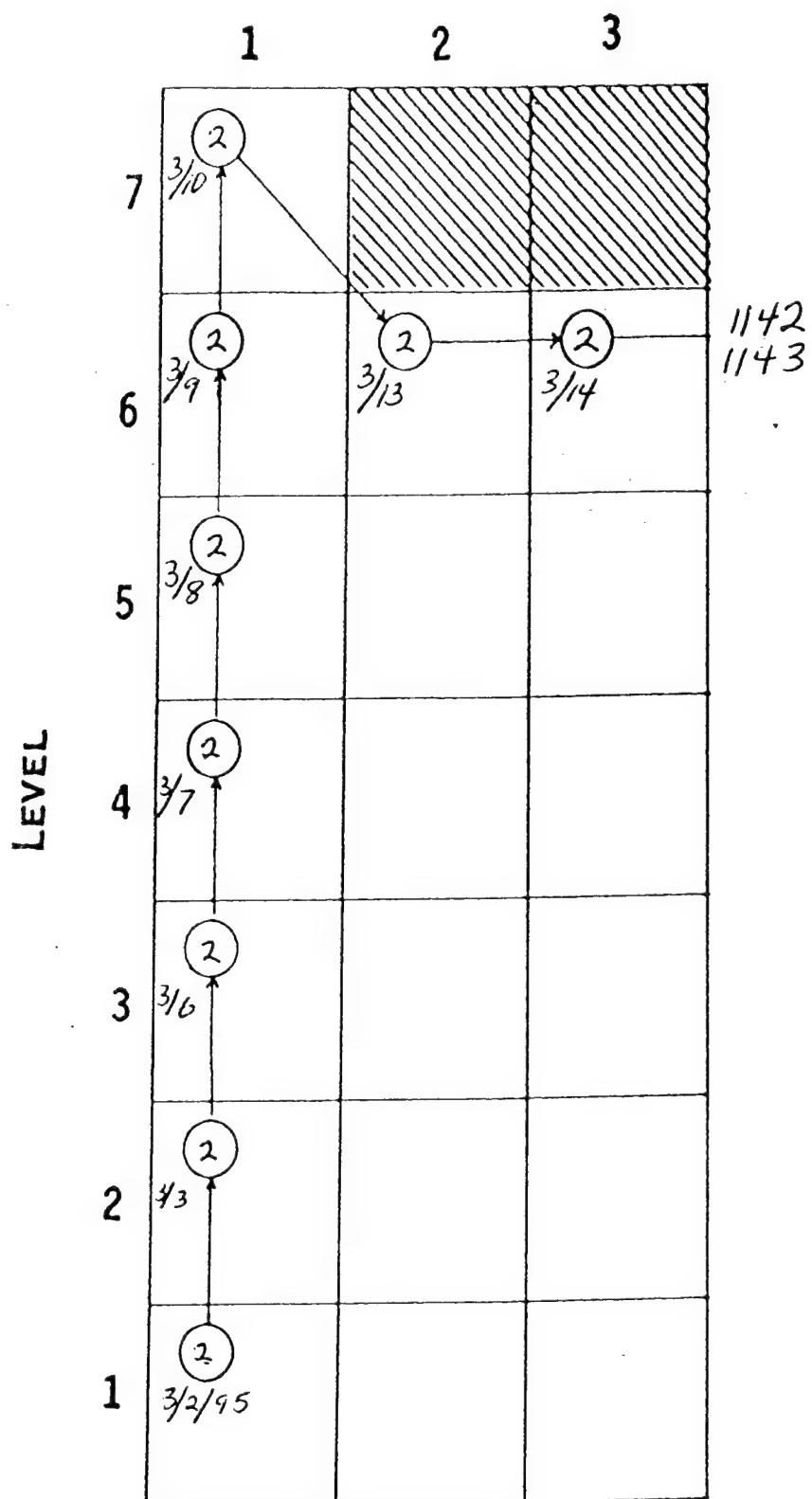
Appendix E-13. Exposure Matrix for Subjects 1092, 1093, and 1096, January 1995.



Appendix E-14. Exposure Matrix for Subjects 1102, 1105, and 1106, January 1995.



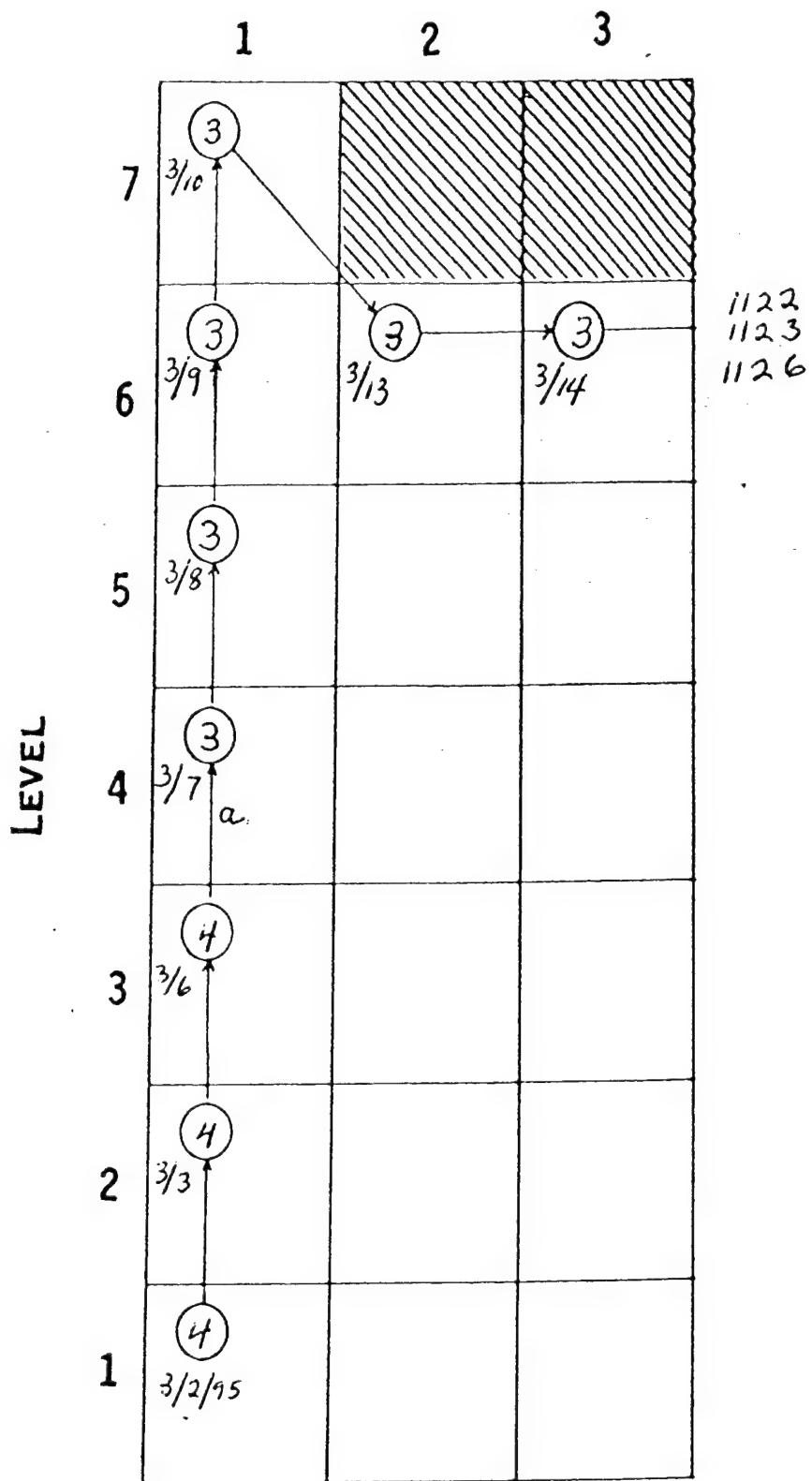
Appendix E-15. Exposure Matrix for Subjects 1112, 1113, and 1116, January 1995.
 (Note: Subject 1113 had a positive guaiac on 1/30/95;
 negative on 1/31/95. Delayed one day.)



Appendix E-16. Exposure Matrix of Subjects 1142, and 1143,
March 1995.

	1	2	3	
LEVEL				
7	(4) 3/10			
6	(4) 3/9	(4) 3/13	(4) 3/14	1132 1133 1135 1136
5	(4) 3/8			
4	(4) 3/7			
3	(4) 3/6			
2	(4) 3/3			
1	(4) 3/2/95			

Appendix E-17. Exposure Matrix of Subjects 1132, 1133, 1135, and 1136, March 1995



Appendix E-18. Exposure Matrix of Subjects 1122, 1123, 1125, and 1126, March 1995.

(Note: Subject 1125 was dropped after Level 3 because of his disclosure of a history of fainting and the fact that he had an episode the night of 6 March 1995.)

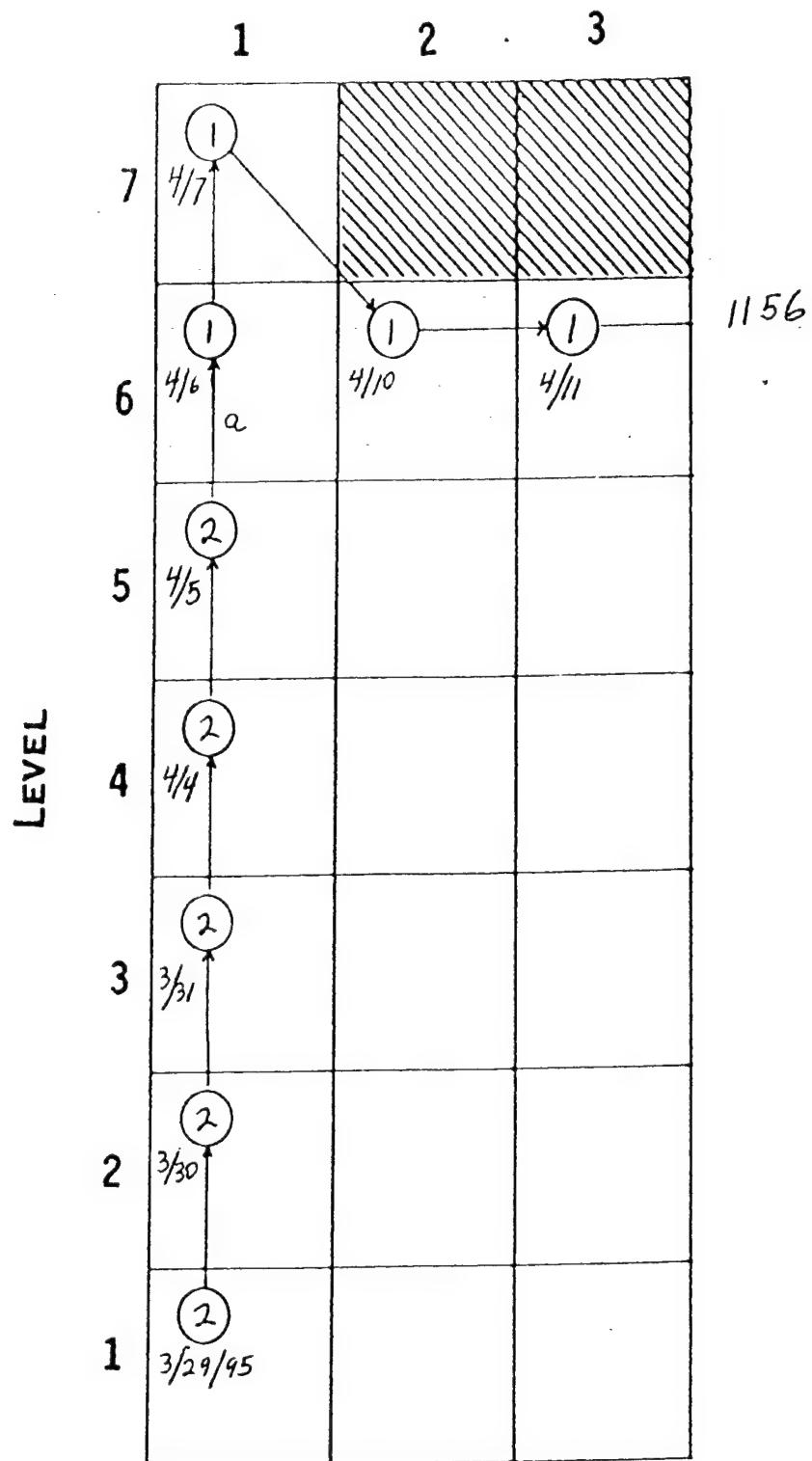
	1	2	3
LEVEL			
7	(4) 4/13		
6	(4) 4/12	(4) 4/14	(4) 4/17
5	(4) 4/11		
4	(4) 4/10		
3	(4) 4/7		
2	(4) 4/6		
1	(4) 4/5/95		
			1165 1166 1172 1173

Appendix E-19. Exposure Matrix for Subjects 1165, 1166, 1172, and 1173, March/April 1995.

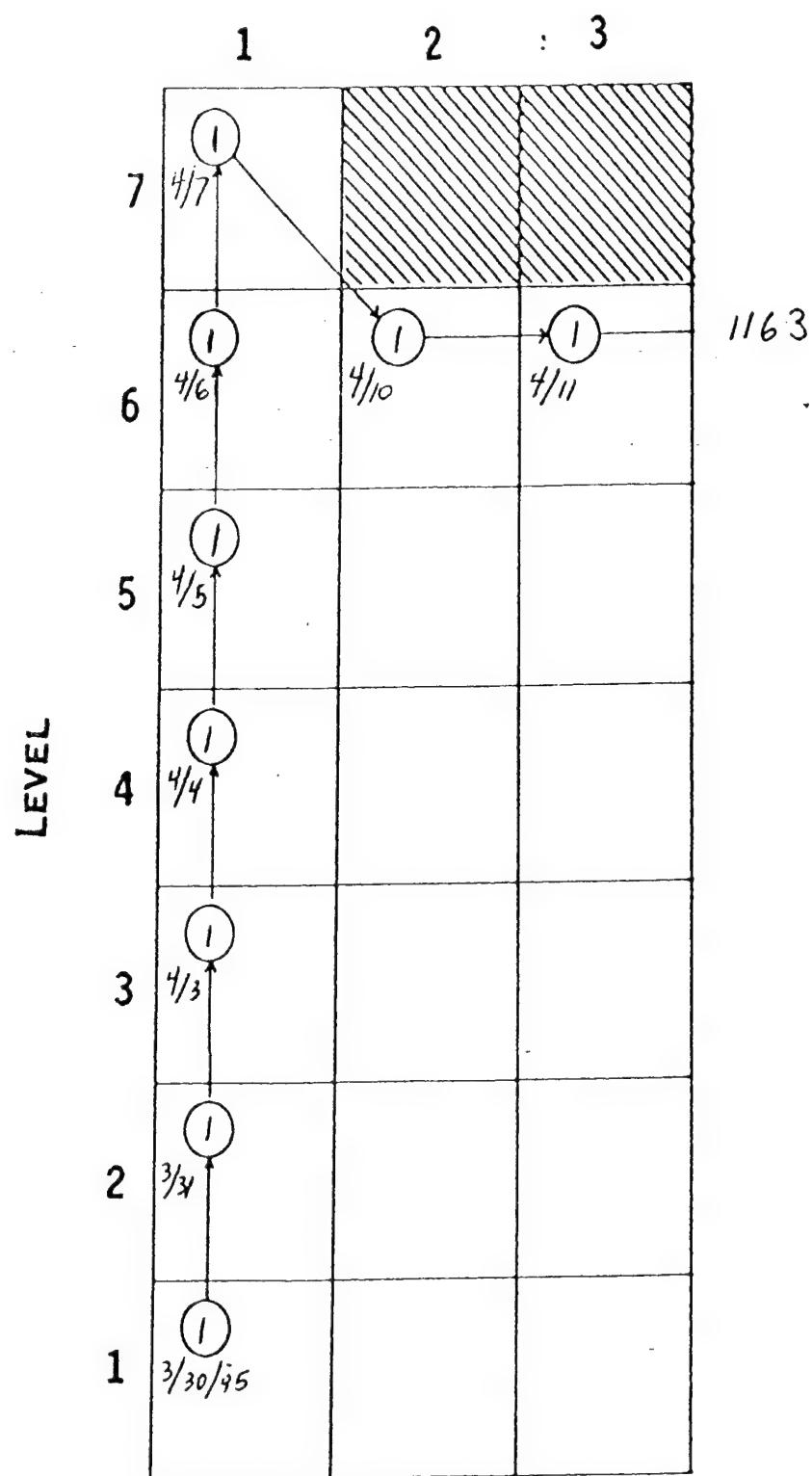
	1	2	3
LEVEL			
7	(2) 4/6		
6	(2) 4/5	(2) 4/7	(2) 4/0
5	(2) 4/4		
4	(2) 4/3		
3	(2) 3/31		
2	(2) 3/30		
1	(2) 3/29/95		

// 1152
// 1153

Appendix E-20. Exposure Matrix for Subjects 1152, and 1153,
March/April 1995.



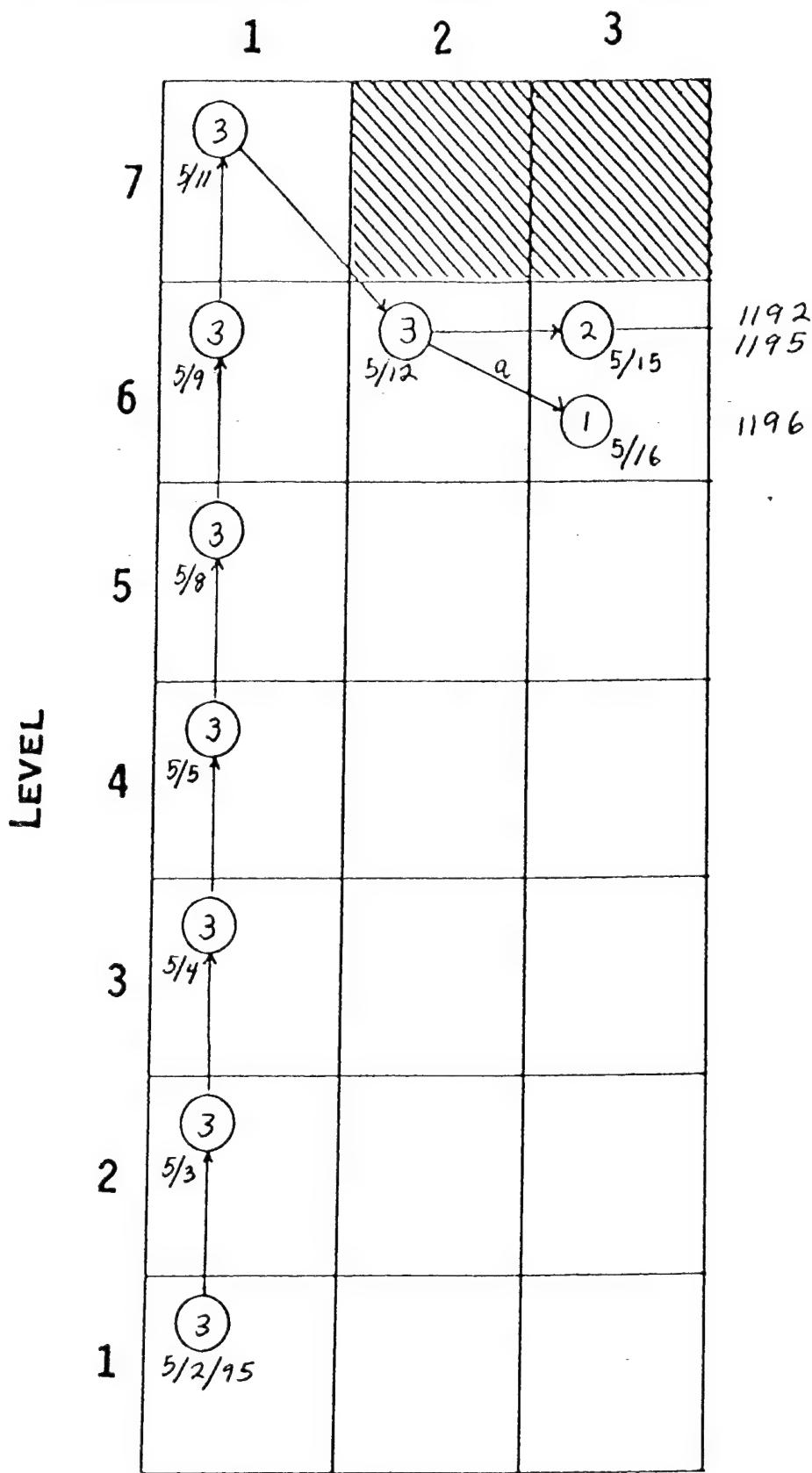
Appendix E-21. Exposure Matrix for Subject 1155 and 1156,
 March/April 1995.
 a. Subject 1155 elected to stop after Level 5.



Appendix E-22. Exposure Matrix for Subject 1163, March/April 1995.

	1	2	3
LEVEL			
7	(4) 5/11		
6	(4) 5/9	(4) 5/12	(4) 5/15
5	(4) 5/8		
4	(4) 5/5		
3	(4) 5/4		
2	(4) 5/3		
1	(4) 5/2/15		
			1182 1183 1185 1186

Appendix E-23. Exposure Matrix for Group 118, May 1995.



Appendix E-24. Exposure Matrix for Group 119, May 1995.

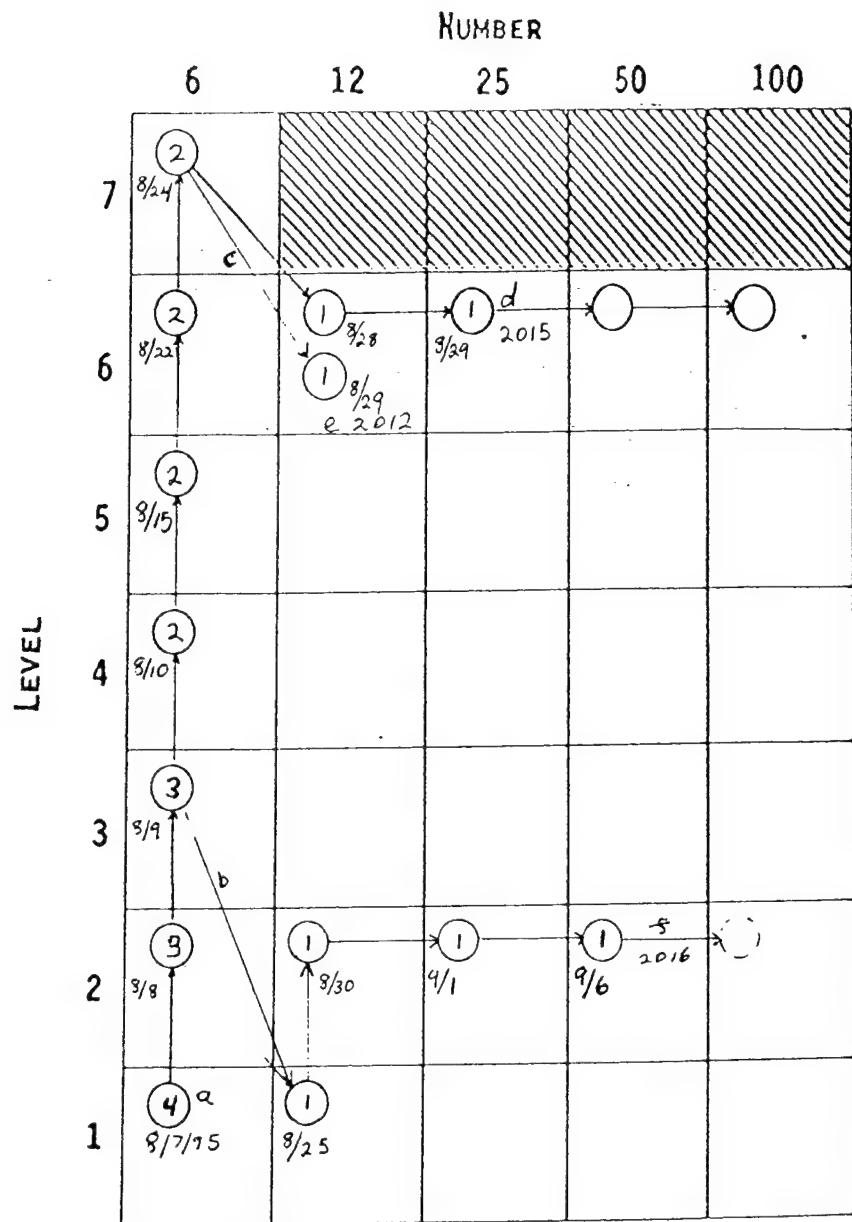
a. Subject 1196 had a positive guaiac on 15 may from eating raw meat. He was negative on 16 May.

	1	2	3
LEVEL			
7	(3) 5/11		
6	(3) 5/9	(3) 5/12	(3) 5/15
5	(3) 5/8		
4	(3) 5/5		
3	(3) 5/4		
2	(3) 5/3		
1	(3) 5/2/95		

Rows 2 through 6 are shaded.

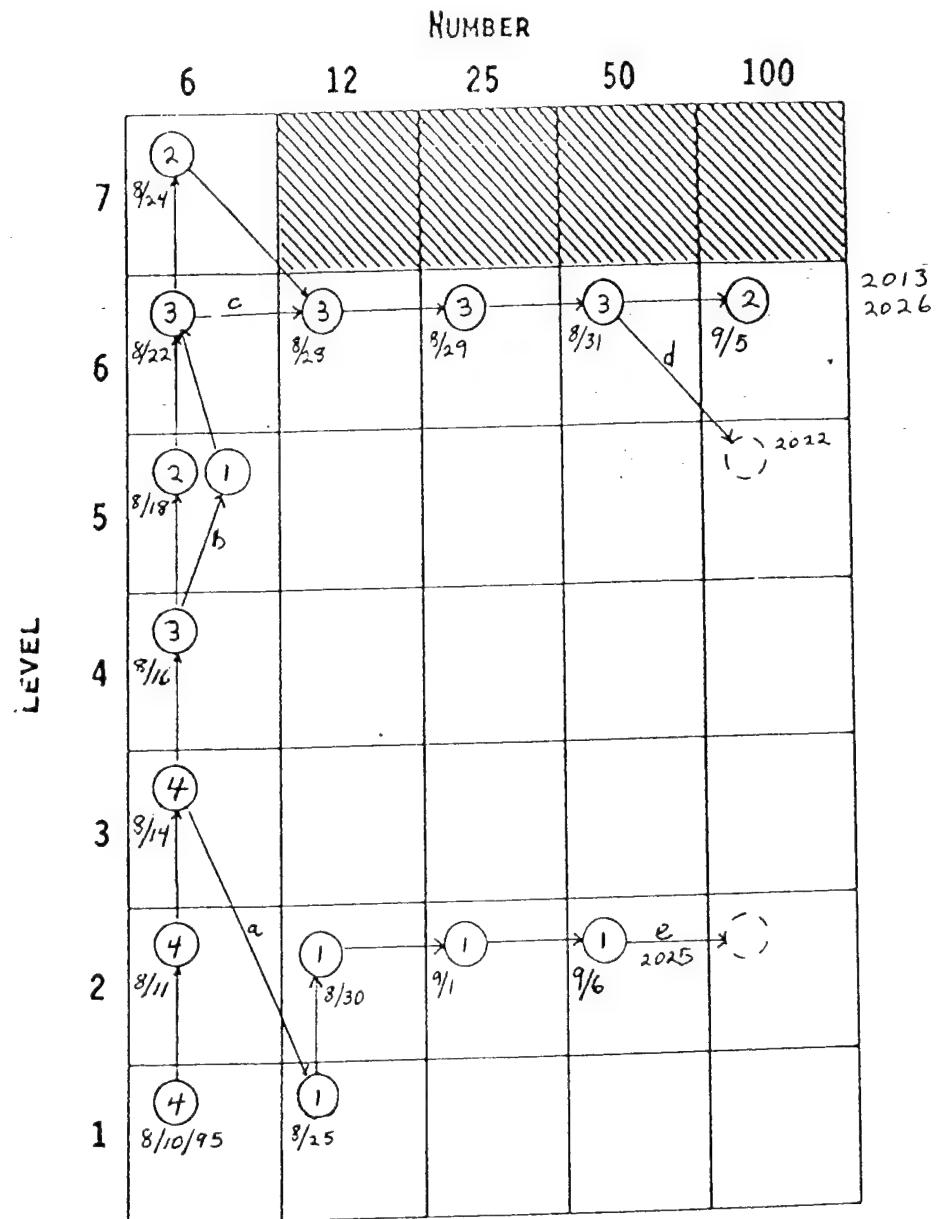
Column 3 has an 'X' at row 6.

Appendix E-25. Exposure Matrix for Group 120, May 1995.



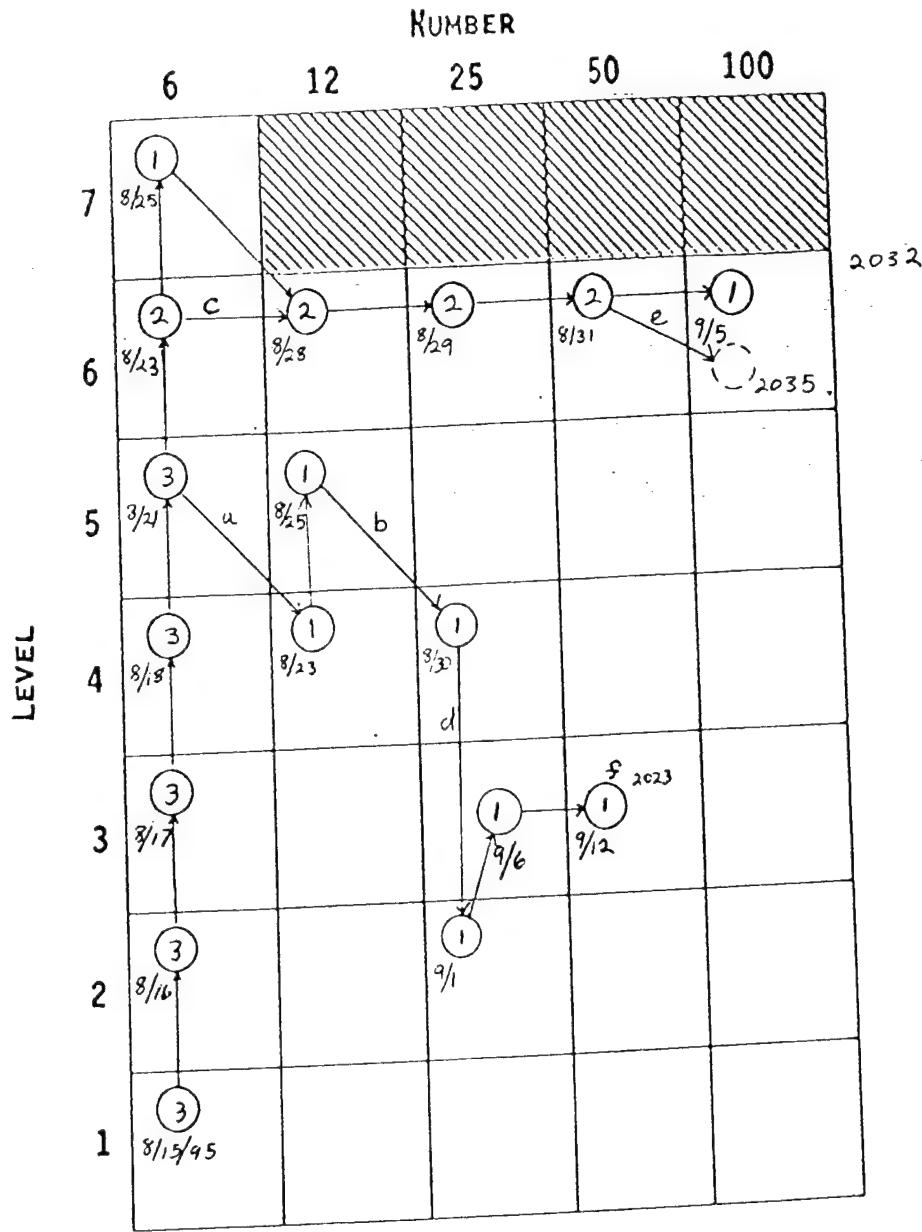
Appendix E-26. Exposure Matrix for Subjects 2012, 2015, and 2016, August 1995.

- Subject 2013 was required to repeat condition 1/6 because of a mechanical failure of the audiometer (stepping attenuator) after his exposure to 1/6. He was moved to next group.
- Subject 2016 was a failure at 2000 Hz after condition 3/6.
- Subject 2012 was sick on 28 August, selected to go to Level 7.
- Subject 2015 elected to stop after five shots of the 25 shots at Level 6.
- Subject 2012 was an elective failure after condition 6/12.
- Subject 2016 elected not to go to condition 2/100.



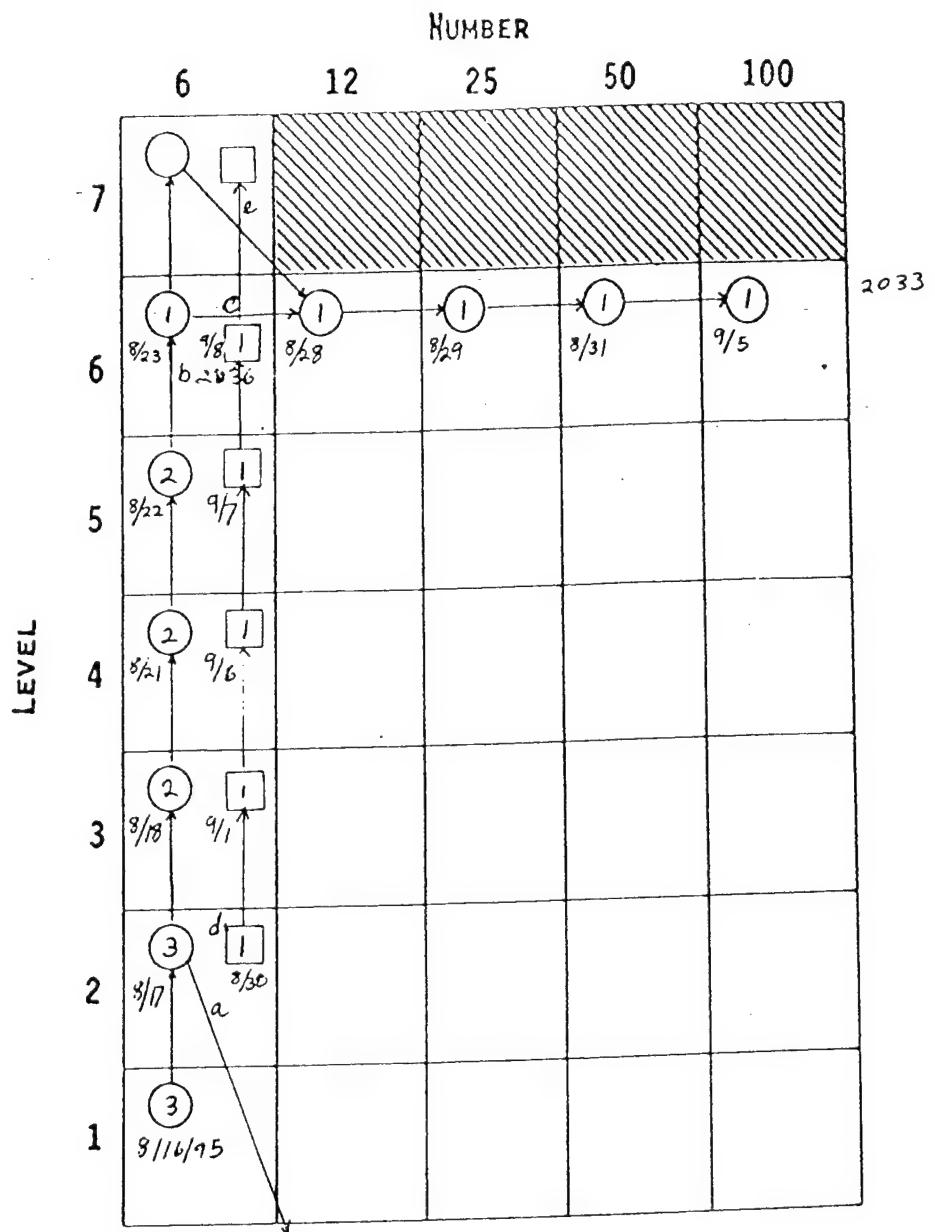
Appendix E-27. Exposure Matrix for Subjects 2022, 2013, 2025, and 2026, August 1995.

- a. Subject 2025 was an audiometric failure with a TTS of 25 dB at 1 kHz at 20 minutes.
- b. Subject 2013 was sick on 8/18/95 and was exposed to Level 5 on 8/21.
- c. Subject 2013 elected not to go to Level 7.
- d. Subject 2022 was a conditional failure after condition 6/50 with a TTS of 17 dB at 2000 Hz. Because of time constraints, further testing was terminated.
- e. Subject 2025 elected not to go to condition 2/100.



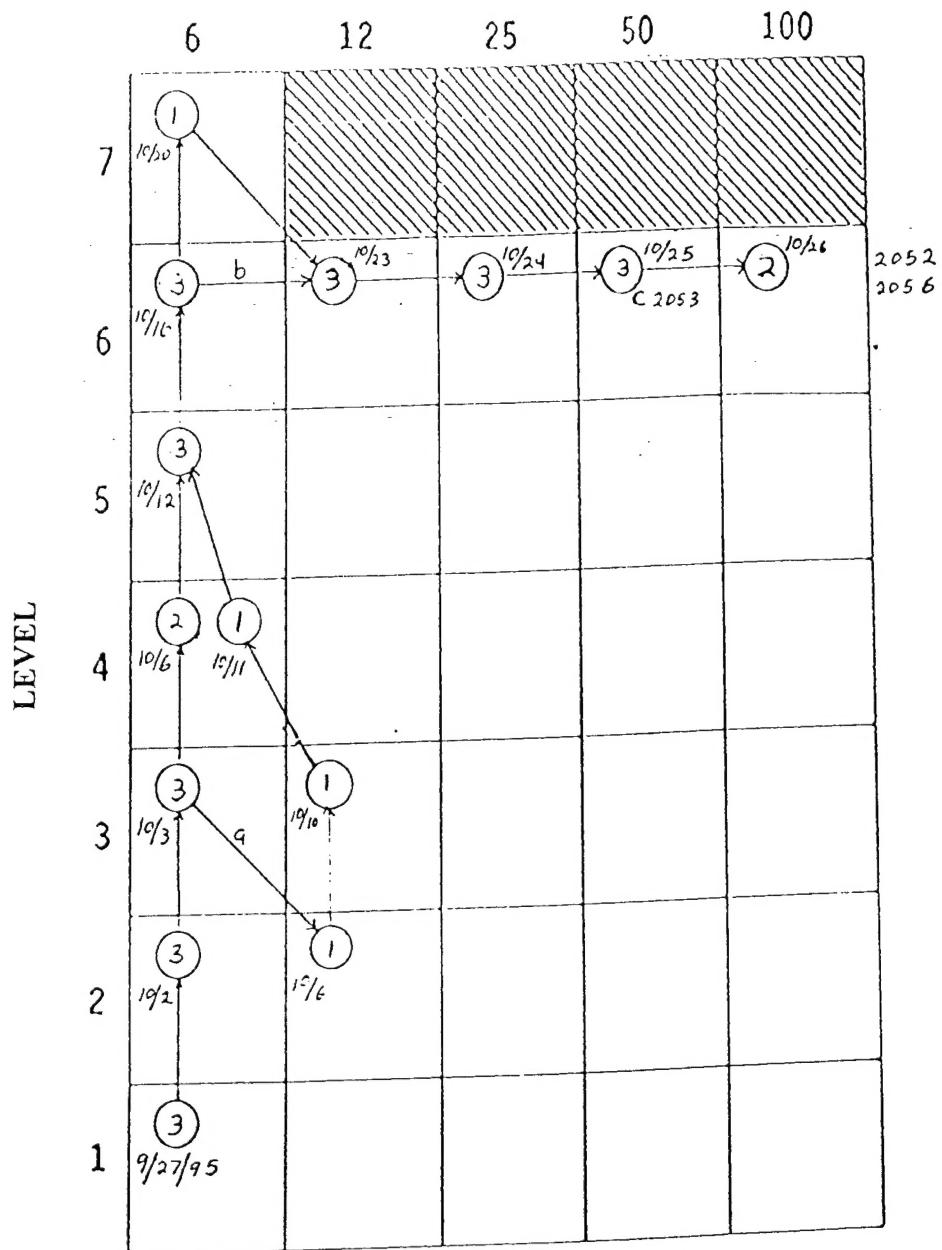
Appendix E-28. Exposure Matrix for Subjects 2032, 2023, and 2035, August 1995.

- a. Subject 2023 was a conditional failure with a TTS of 18 dB at 3 kHz at the 20-minute post audiogram (TTS) was 14 dB.
- b. Subject 2023 was a conditional failure after condition 5/12 with a TTS of 22 dB at 3 kHz.
- c. Subject 2035 elected not to go to Level 7.
- d. Subject 2023 was a failure with a TTS. Computer problems caused the delay.
- e. Subject 2035 was sick on 8/31/95.
- f. Subject 2023 elected to stop further exposure after the first 12 shots of condition 3/50. His ears started ringing after shot 10 and became worse after shot 12. No TTS occurred. Considered an elective failure after condition 3/25.



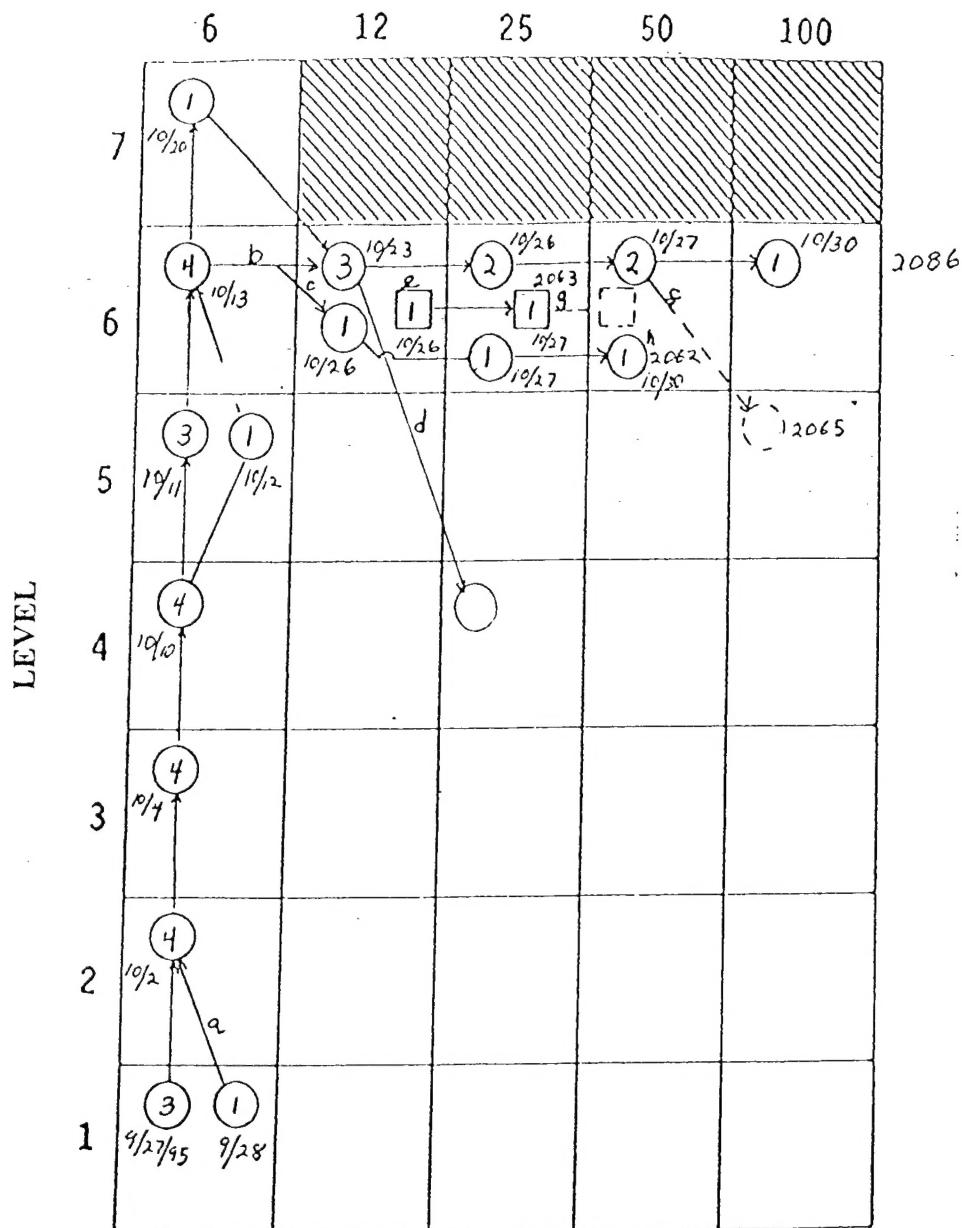
Appendix E-29. Exposure Matrix for Subjects 2042, 2033, and 2036, August 1995.

- a. Subject 2042 was a failure with a TTS of 20 dB at 2 minutes and 28 dB at 1 hour.
- b. Subject 2036 elected to stop further exposures.
- c. Subject 2033 elected not to go to Level 7.
- d. Subject 2042 started with level 2 protection on 30 August.
- e. Subject 2042 was an elective failure after condition 6/6, second-level hearing protection.



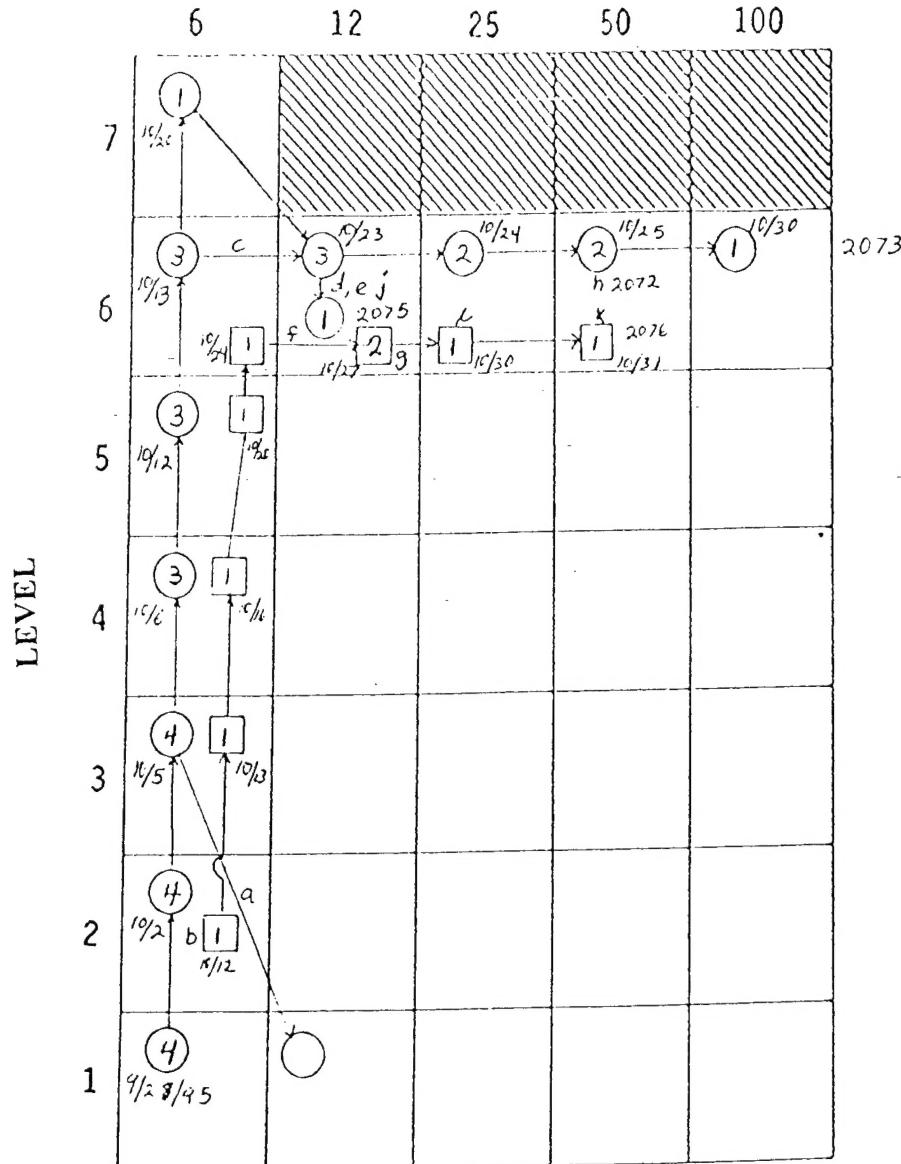
Appendix E-30. Subject Nos. 2052, 2053, and 2056, September-October 1995.

- A. Subject 2056 was a conditional failure with a TTS of 23 dB at 6000 Hz.
- B. Subjects 2053 and 2056 elected not to go to Level 7.
- C. Subject 2053 elected not to go to condition 6/100.



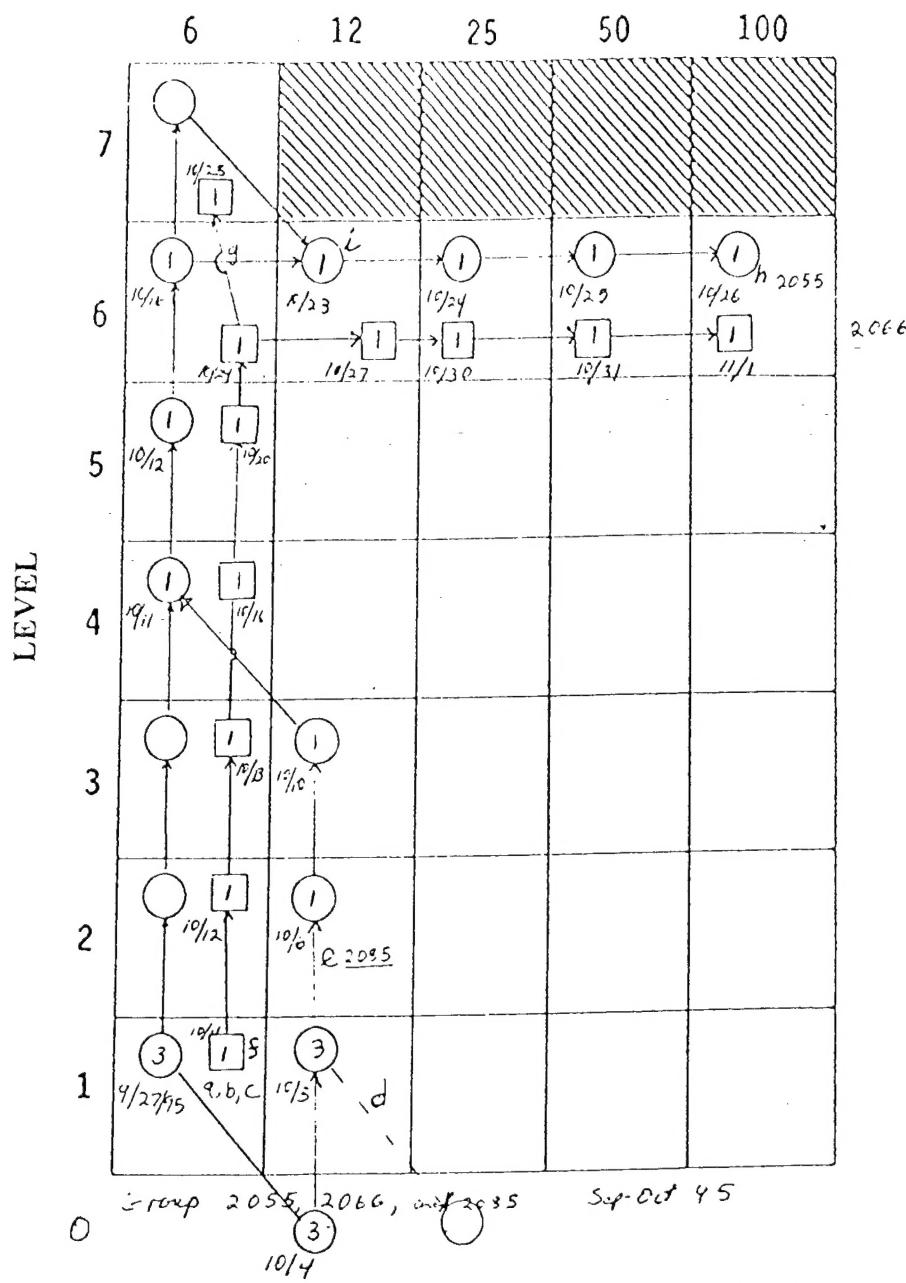
**Appendix E-31. Subject Nos. 2062, 2063, 2065, and 2086,
September-October 1995.**

- A. Subject 2065 delayed 1 day due to needing his ears cleaned.
- B. Subject 2062, 2063, and 2065 elected not to go to Level 7.
- C. Subject 2062 had strep throat on 23 October.
- D. Subject 2063 was an auditory failure with a TTS₂ of 28 dB at 1 kHz.
- E. Subject 2063 started second-level hearing protection.
- F. Subject 2065 was a conditional failure with a TTS₂ of 19 dB at 4 kHz and a TTS₂₀ of 22 dB at 2 kHz. Subject elected not to go to condition 5/100.
- G. Subject 2063 was an elective failure to condition 6/50 with second-level protection. Cited headaches caused by the blast.
- H. Subject 2062 was an elective failure for condition 6/100.



Appendix E-32. Exposure Matrix for Subject Nos. 2072, 2073, 2075, and 2076, September-October 1995.

- A. Subject 2076 was an audiometric failure with a TTS₂ of 38 dB at 4 kHz and 22 dB at 8 kHz.
- B. Subject 2076 started second-level hearing protection with E.A.R.® foam plugs.
- C. Subjects 2072 and 2075 elected not to go to Level 7.
- D. Subject 2075 came off the pad early because his ringing kept getting worse after shot 3. He came off after shot 8. He did not have a trace of TTS, thus, he was required to redo condition 6/12.
- E. Subject 2075 was a conditional failure with a TTS₂ of 15 dB at 4 kHz
- F. Subject 2076 elected not to go to Level 7 with second-level hearing protection.
- G. Subject 2075 began second-level hearing protection.
- H. Subject 2072 elected not to go to condition 6/100.
- I. Subject 2076 was taken off the pad after 20 shots because of a sinus headache that kept becoming worse with each blast.
- J. Subject 2075 elected to stop further exposure both to 6/25 with second-level hearing protection or condition 5/25 with first-level hearing protection.
- K. Subject 2076 came off the pad at 40 shots because of a sinus headache that started at shot 10 and increased until shot 20, then stayed constant. Elected not to go to condition 6/100.



Appendix E-33. Subjects 2055, 2066, and 2085, September-October 1995.

- A. Subject 2055 was a conditional failure with a TTS₂ of 16 dB at 2000 Hz.
- b. Subject 2066 was a conditional failure with a TTS₂ of 21 dB at 2000 Hz.
- c. Subject 2085 was a conditional failure with a TTS₂ of 18 dB at 8 kHz.
- d. Subject 2066 was a conditional failure with a TTS₂ of 16 dB at 2 kHz and a TTS₂₀ of 17 dB at 3 kHz.
- E. Subject 2085 was administratively dropped from the study for a behavior problem (skipping out from his barracks several times at night without permission).
- F. Subject 2066 started second-level hearing protection (E.A.R.® Foam plug) on 10/11/95.
- G. Subject 2055 elected not to go to Level 7.
- H. Subject 2055 elected to stop further exposure after 44 shots of condition 6/100. He adjusted his plug once, yet his ringing in his ear kept increasing.
- I. Subject 2055 felt his earplug loosen, so he came off the pad after shot 9 of the 12 shots.